

ABSTRACT

A wireless linear motor comprising: a stationary stator having permanent magnets; a movable stage having coils and a controller with a transceiver for wirelessly communicating with an external data processing system, the controller adapted to energize the coils to position the stage
5 over the stator in response to control signals from the external system; and, a frame having first and second electrically conductive linear guides for slideably mounting the stage over the stator, wherein each linear guide has a stage portion attached to the stage through a first electrical insulator, a frame portion attached to the frame through a second electrical insulator, a plurality of ball bearings disposed between and electrically coupling the stage and frame portions, and a
10 conductor coupling the stage portion to the controller for providing electrical power from an external power supply to the controller through the frame portion of each guide.